

II. Remarks

A. Introduction

Claims 1-14 are pending, the entry of this amendment resulting in cancellation of claims 15-17, without prejudice or disclaimer. Applicant reserves the right to file in any related application the claims now cancelled or any other claim supported by the application, as originally filed.

Claim 1 stands rejected under 35 U.S.C. §102 as being anticipated by *Yagi et al.* (U.S. patent 6,651,320). Claim 1 stands rejected under 35 U.S.C. §102(b) as being anticipated by *Sakemi* (U.S. patent 5,817,542). Claim 2 stands rejected under 35 U.S.C. §103(a) as being unpatentable over *Sakemi* in view of the *American Technical Ceramics bulletin* (“ATC bulletin”). Claims 6 and 7 stand rejected under 35 U.S.C. §103(a) as being unpatentable over *Sakemi* in view of the *ATC bulletin* and *Lane et al.* (U.S. patent 6,599,619). Claims 3 and 5 stand rejected under 35 U.S.C. §103(a) as being unpatentable over *Sakemi* in view of *Ono et al.* (U.S. patent 6,890,789). Claim 4 stands rejected under 35 U.S.C. §103(a) as being unpatentable over *Sakemi* in view of the *ATC bulletin* Teshima et al. (U.S. patent 6,651,870), *Venugopalan et al.* (U.S. publ. 2004/0201110), *Hunninghaus et al.* (U.S. patent 5,708,566) and *Abramov* (U.S. patent 6,223,419). Claim 5 stands rejected under 35 U.S.C. §103(a) as being unpatentable over *Yagi et al.* Claim 8 stands rejected under 35 U.S.C. §103(a) as being unpatentable over *Sakemi* in view of *Lane et al.* Claims 9 and 11 stand rejected under 35 U.S.C. §103(a) as being unpatentable over *Sakemi* in view of *Ono et al.* and *Davis et al.* (U.S. patent 6,590,285). Claim 10 stands rejected under 35 U.S.C. §103(a) as being unpatentable over *Sakemi* in view of *Ono et al.* and *Davis et al.*, as applied to claims 9 and 11, and further in view of the *ATC bulletin*, Teshima et al., *Venugopalan et al.*, *Hunninghaus et al.* and *Abramov*. Claims 12 and 13 stand rejected under 35 U.S.C. §103(a) as being unpatentable over *Sakemi* in view of *Ono et al.* and *Davis et al.*, as applied to claims 9 and 11, and further in view of the *ATC bulletin*. Claim 14 stands rejected under 35 U.S.C. §103(a) as being unpatentable over *Sakemi* in view of *Ono et al.* and *Davis et al.*, as applied to claims 9 and 11, and further in view *Lane et al.*

B. Rejections Under 35 U.S.C. §102

Claim 1 stands rejected under 35 U.S.C. §102 as being anticipated by *Yagi et al.* (U.S. patent 6,651,320) or *Sakemi* (U.S. patent 5,817,542).

Claim 1 has been amended to recite, in pertinent part: “applying a non-conductive bonding material around only the edge of an area where the circuit element overlies the substrate to form a non-conductive bond between the circuit element and the substrate.” Neither *Yagi et al.*, nor *Sakemi* discloses these limitations. Specifically, *Yagi et al.* shows in Figures 1, 3-8, 12-19 and 21-24 that thermosetting insulating adhesive 107 is applied to a region between semiconductor element 103 and circuit board 101, not “around only the edge of an area where the circuit element overlies the substrate” (emphasis added). Thus, *Yagi et al.* does not disclose at least these limitations of claim 1.

Sakemi similarly fails to disclose these teachings of claim 1. Figures 1C and 2C of *Sakemi* show an insulating adhesive 12 and 13, respectively, applied to a region between component 5 and substrate 1, however, in both Figures 1C and 2C this region does not comprise a region that is “around only the edge of an area where the circuit element overlies the substrate” (emphasis added). Thus, *Sakemi* does not disclose at least these limitations of claim 1.

As neither *Yagi et al.*, nor *Sakemi* discloses “applying a non-conductive bonding material around only the edge of an area where the circuit element overlies the substrate to form a non-conductive bond between the circuit element and the substrate,” applicant respectfully traverses the rejections of claim 1 under 35 U.S.C. §102 and solicits the withdrawal thereof. Applicant further respectfully submits that none of the cited art overcomes these shortcomings of *Yagi et al.* and *Sakemi*, and therefore, claim 1 and all claims dependent thereon are in condition for allowance.

C. Rejections Under 35 U.S.C. §103

Claim 9 stands rejected under 35 U.S.C. §103(a) as being unpatentable over *Sakemi* in view of *Ono et al.* (U.S. patent 6,890,789) and *Davis et al.* (U.S. patent 6,590,285). Claim 9 has been amended to recite, in pertinent part: “applying an amount of liquid encapsulant material around only the edge of an area where the electrical device overlies the circuit board.” Neither of *Sakemi*, *Ono et al.* and *Davis et al.*, nor any combination thereof or of any of the other cited art discloses these limitations. The Office action cites *Sakemi* for the alleged disclosure of “applying an amount of non-conductive bonding material around the edges of the electrical device ...” As noted above, Figures 1C and 2C of *Sakemi* show an insulating adhesive 12 and 13, respectively, applied to a region between component 5 and substrate 1, however, in both Figures 1C and 2C this region does not comprise a region that is “around only the edge of an

area where the electrical device overlies the circuit board” (emphasis added). Thus, *Sakemi* does not disclose at least these limitations of claim 9. *Ono et al.* and *Davis et al.* similarly fail to disclose at least these limitations of claim 9.

As neither *Sakemi*, *Ono et al.* and *Davis et al.*, nor any combination thereof or of any of the other cited art discloses “applying an amount of liquid encapsulant material around only the edge of an area where the electrical device overlies the circuit board,” applicant respectfully traverses the rejection of claim 9 under 35 U.S.C. §103 and solicits the withdrawal thereof. Applicant further respectfully submits that none of the cited art overcomes these shortcomings of the *Sakemi-Ono et al.-Davis et al.* combination, and therefore, claim 9 and all claims dependent thereon are in condition for allowance.

D. Conclusion

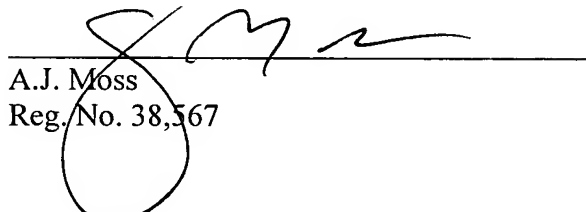
Reconsideration is respectfully requested. Applicant believes the case is in condition for allowance and respectfully requests withdrawal of the rejections and allowance of the pending claims.

Applicant hereby petitions for any extension of time which may be required to maintain the pendency of this case, and any required fee, except for the Issue Fee, for such extension is to be charged to **Deposit Account No. 19-3878**.

The Examiner is invited to telephone the undersigned at the telephone number listed below if it would in any way advance prosecution of this case.

Respectfully submitted,

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